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In re application of:

Art Unit: 2437

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For: Fingerprinting Applications (as previously  
amended)

Examiner: Jeffery L. Williams

Date: May 12, 2009

**APPEAL BRIEF**

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Sir:

Appellants respectfully request the Board of Patent Appeals and Interferences (hereafter the “Board”) to *reverse* the outstanding final rejection of the pending claims.

This Appeal Brief is in furtherance of a Notice of Appeal filed November 18, 2008, and the Notice of Panel Decision from Pre-Appeal Brief Review mailed December 3, 2009. Please charge the fees required under 37 CFR 1.17(f) or any other fees needed to consider this Appeal Brief to our deposit account no. 50-1071.

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### **REAL PARTY IN INTEREST**

The real party in interest is Digimarc Corporation, 9405 SW Gemini Drive, Beaverton, Oregon.

### **RELATED APPEALS AND INTERFERENCES**

Parent patent application No. 11/051,502, filed February 3, 2005, is on appeal. There are no other related appeals or interferences.

### **STATUS OF CLAIMS**

Claims 30 and 36-55 are pending in the present application. *See the final Office Action, Office Action Summary, item 4.*

Each of the pending claims (i.e., claims 1-9, 11, 15-17 and 19-26) stands finally rejected and is on appeal. *See the final Office Action, Office Action Summary, item 6; see also the November 18, 2008 Notice of Appeal.*

Claims 1-29 and 31-35 were previously canceled.

### **STATUS OF AMENDMENTS**

All earlier-filed amendments have been entered.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

The claims relate generally to content recognition techniques including so-called “fingerprinting”. Fingerprinting is a process by which content identifying data is derived from content itself. For example, an audio or video signal is processed to yield a set of identifying characteristics. These characteristics can be used to recognize or identify the audio or video signal.

Claim 30 recites a method of monitoring or analyzing a content item which is to be broadcast through a broadcasting network [see, e.g., page 10, line 3 – page 12, line 7; see also Fig. 2]. The content item to be identified by a fingerprint of the content item derived from the

content item itself [see, e.g., page 10, lines 4-6]. The method includes: maintaining a list of content items, the list comprising a subset of content items designated as active, the list of content items being associated with one or more fingerprints derived from the content items themselves [see, e.g., page 11, lines 25-26; see also page 11, lines 13-17 and page 10, lines 4-6]; deriving at least one fingerprint from a content item monitored or analyzed from the broadcast network [see, e.g., page 10, lines 4-6 and page 11, lines 9-12]; and interrogating the list of content items with the at least one fingerprint to identify the monitored or analyzed content item [see, e.g., page 11, lines 13-24].

Claim 40 recites a method including: maintaining a list of content items, the list of content items being associated with one or more fingerprints derived from data representing audio or video samples corresponding to the content items [see, e.g., page 10, lines 4-7; see also page 11, lines 9-12, and Fig. 2]; identifying a subset of the list of content items as active content items, the subset being associated with those content items being subject to updates [see, e.g., page 11, lines 25-29 and lines 19-20; see also page 12, lines 1-4]; deriving at least one fingerprint from a content item monitored or obtained from a network [see, e.g., page 10, lines 4-7, page 11, lines 12-24]; and interrogating the list of content items with the at least one fingerprint to identify the monitored or obtained content item [see, e.g., page 10, lines 4-7, page 11, lines 12-24].

Claim 45 recites a method of claim 30 wherein the subset of content items designated as active are associated with database entries to be updated [see, e.g., page 10, lines 4-7, page 11, lines 12-24].

Claim 36 recites a method of monitoring or analyzing a content item which is to be transmitted through a network, the content item to be identified by a fingerprint of the content item derived from the content item itself [see, e.g., page 10, line 3 – page 12, line 7; and Fig. 2]. The method includes: maintaining a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself [see, e.g., page 10, lines 4-7; see also page 11, lines 9-12]; receiving a playlist, the playlist identifying content items to be transmitted through the network during a predetermined time period [see, e.g., page 10, lines 14-17; see also page 11, lines 9-12; see also page 12, lines 1-4],

based at least in part on the playlist, updating the list of content items by adding at least a plurality of content items and removing at least a plurality of content items, but not all of the content items, from the list [see, e.g., page 11, lines 25-28, page 11, lines 19-20 and page 10, lines 14-17; see also page 12, lines 1-4]; deriving at least one fingerprint from a content item monitored or analyzed from the network [see, e.g., page 10, lines 4-6 and lines 25-30]; and interrogating the list of content items with at least one derived fingerprint to identify the monitored or analyzed content item [see, e.g., page 10, lines 4-6, lines 13-17].

Claim 38 recites a method including: receiving a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself [see, e.g., page 10, lines 4-6 and lines 25-28; page 11, lines 9-12; and Fig. 2]; adding and deleting entries in a table or data structure according to the list of content items [see, e.g., page 11, lines 25-29 and lines 19-20; see also page 10, lines 14-17]; receiving a content item, the content item comprising audio or video [see, e.g., page 10, lines 19-24]; deriving at least one fingerprint from the content item itself [see, e.g., page 10, lines 4-6 and lines 25-28; page 11, lines 9-12]; interrogating the table or data structure with the derived at least one fingerprint to identify the content item [see, e.g., page 10, lines 27-28, page 11, lines 13-17 and lines 18-29; see also page 12, lines 1-4]; and communicating a signal representing at least the identified content item to a remote device [see, e.g., page 11, lines 18-22; and page 24, lines 1-4 with page 4, lines 1-18].

Of course, additional examples will fall within the scope of the pending claims; also, the above specification support should not be viewed as being exhaustive.

### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 30 and 36-55 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Published Patent Application No. US 2003-0037010 (hereafter referred to as “the Schmelzer application” or simply as “Schmelzer”) in view of U.S. Published Patent Application No. US 2002-0168082 A1 (hereafter referred to as “the Razdan application” or simply as “Razdan”).

2. Claims 30 and 36-55 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

## ARGUMENT

### *Rejections under U.S.C. 103(a) over Schmelzer and Razdan*

#### Claim 30

Independent claim 30 recites:

30. *A method of monitoring or analyzing a content item which is to be broadcast through a broadcasting network, the content item to be identified by a fingerprint of the content item derived from the content item itself, said method comprising:*

*maintaining a list of content items, the list comprising a subset of content items designated as active, the list of content items being associated with one or more fingerprints derived from the content items themselves;*

*deriving at least one fingerprint from a content item monitored or analyzed from the broadcast network; and*

*interrogating the list of content items with the at least one fingerprint to identify the monitored or analyzed content item.*

It is well established that the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reasons why the claimed invention would have been obvious. The Supreme Court in KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007), noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. The Federal Circuit has stated that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also KSR, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

The July 24, 2008 final Office Action (referred to in this Brief as the “final Office Action”) fails to establish a *prima facie* case of obviousness for claim 30 since it fails to provide a clear articulation of the reasons why the combination of claim 30 would have been obvious.

For example, claim 30 recites – in combination with other features – maintaining a list of content items, *the list comprising a subset of content items designated as active*.

The final Office Action cites to Schmelzer at paragraphs 6, 7 and 34 to meet these features. See the final Office Action, page 7, lines 1-3. But Schmelzer’s paragraphs 6 and 7 merely provide background on peer-to-peer file sharing systems (e.g., Napster) and the rampant problem of copyright infringement. And while Schmelzer’s paragraph 34 does discuss comparing generated fingerprints with an archive of fingerprints for registered copyright works, it does not discuss a list (or archive) including a *subset of content items designated as active*.

The final Office Action merely states: “[T]he content item within the list are the subset of all copyright works and are designated as ‘active’ to be monitored.” See the final Office action, page 10, lines 17-19. This statement is not helpful in rendering claim 30 obvious for at least two reasons.

First, the final Office Action’s characterization overstates Schmelzer’s teachings and the reasonable inferences that should be drawn there from. For example, Schmelzer does not designate a subset of the content items represented on the list of content item as “active”.

Second, the final Office Action’s characterization misinterprets claim 30. Claim 30 requires that a subset of the maintained list of content items be designated as “active”. The final Office Action, instead, would say that the entire maintained list include a “subset” of all possible copyright works. See the final Office Action, page 7, lines 1-3. Indeed, Schmelzer does not designate a subset of the maintained list of content items as “active,” as required by claim 30.

Thus, the final Office Action fails to provide a clear articulation of the reasons why the claimed invention would have been obvious over Schmelzer and Razdan.

Appellants respectfully request that the final rejection of claim 30 be reversed.

Claim 40

Independent claim 40 recites:

40. *A method comprising:*

*maintaining a list of content items, the list of content items being associated with one or more fingerprints derived from data representing audio or video samples corresponding to the content items;*

*identifying a subset of the list of content items as active content items, the subset being associated with those content items being subject to updates;*

*deriving at least one fingerprint from a content item monitored or obtained from a network; and*

*interrogating the list of content items with the at least one fingerprint to identify the monitored or obtained content item.*

Claim 40 recites – in combination with other features – identifying a subset of a list of content items as active content items, the subset being associated with those content items being subject to updates.

The final Office Action fails to expressly address these features.

Instead, it lumps these features with those of twenty (20) other claims, and then devotes a mere 19 lines to rejecting these twenty claims. See the final Office Action, page 7, line 16 – page 8, line 12. That is less than 1 line per claim. We highly doubt that the Board will view this as satisfying the clear articulation requirements set forth in KSR and In re Kahn (citation provided above). Indeed, there is no analysis supporting the rejection of claim 40, including the features of a “*subset being associated with those content items being subject to updates*”.

This type of rejection also cuts against the sage advice given in the MPEP. For example: “[T]he examiner should set forth in the Office action: (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate....” See MPEP 706.02(j). This is because “[i]t is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified



early and the applicant can be given fair opportunity to reply.” See MPEP 706.02(j).

The Board should reverse the rejection of claim 45 at least since the final Office Action fails to even address “identifying a subset of a list of content items as active content items, *the subset being associated with those content items being subject to updates,*” as recited in claim 40.

#### Claim 45

Dependent claim 45 recites:

45. *The method of claim 30 wherein the subset of content items designated as active are associated with database entries to be updated.*

Claim 45 (dependent on claim 30) recites that the subset of content items designated as *active* are associated with database entries to be updated. Like claim 45 above, there is no discussion of these features in the final Office Action.

The Board should reverse the rejection of claims 45 at least since the final Office Action fails to even address a subset of content items designated as *active are associated with database entries to be updated*, as recited in claim 45.

#### Claim 36

Independent claim 36 recites:

36. *A method of monitoring or analyzing a content item which is to be transmitted through a network, the content item to be identified by a fingerprint of the content item derived from the content item itself, said method comprising:*

*maintaining a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself;*

*receiving a playlist, the playlist identifying content items to be transmitted through the network during a predetermined time period;*

*based at least in part on the playlist, updating the list of content items by adding at least*

*a plurality of content items and removing at least a plurality of content items, but not all of the content items, from the list;*

*deriving at least one fingerprint from a content item monitored or analyzed from the network; and*

*interrogating the list of content items with at least one derived fingerprint to identify the monitored or analyzed content item.*

Claim 36 recites – in combination with other features - receiving a playlist, the playlist identifying content items to be transmitted through the network during a predetermined time period; and based at least in part on the playlist, updating the list of content items by adding at least a plurality of content items and removing at least a plurality of content items, but not all of the content items, from the list.

The final Office Action cites to Schmelzer at paragraphs 67 and 83 to meet these features. See the final Office Action, page 8, lines 1-5. One of ordinary skill in the art will disagree with this analysis for at least two reasons.

First, the cited Schmelzer passages say nothing of updating the list of content items based at least in part on a received playlist (which playlist indicates content items to be transmitted through the network during a predetermined time period). Thus, the final Office Action overstates the significance of the references. The cited Schmelzer paragraphs 67 and 83 are reproduced below for convenience.

[0067] *Within the transaction database service 344, a database 345 stores all media received by the media analysis system 326. The database 345 is preferably relational to facilitate dimensional reporting, and preferably also permits high volume updates. A transaction recording and management service 343 is provided to manage queries to the database service 344 and also to manage data recordation in the database 345. Preferably, a data enrichment service 347 in communication with the database service 344 is provided to facilitate either automatic or manual addition of information potentially useful to the CPS (such as according to the method provided in FIG. 7).*

[0083] *Each network appliance 602, 614, 606, 608 preferably includes a memory for receiving and storing content-based identifiers, including fingerprints. Preferably, each network appliance 602, 614, 606, 608 includes a processor to provide content type identification and content assessment capabilities. Each network appliance 602, 614, 606, 608 may be periodically updated with new identifiers from the network data center 630, such as identifiers for newly registered copyrighted works. The distributed architecture of a CPS according to FIG. 8 facilitates rapid monitoring of high-bandwidth watched networks 612, 614, 616, 618. Each network appliance 602, 604, 606, 608 may communicate with the network data center 630 by way of a public network such as the Internet, a virtual private network, a dedicated private network, or any combination of such connection types to promote system reliability in case one becomes inoperable. Additionally, while FIG. 8 illustrates only a single network appliance at each watched network 612, 614, 616, 618, redundant network appliances may be provided at each location to enhance overall system reliability.*

Indeed, the above passages say nothing of updating the list of content items based at least in part on a received playlist (which playlist indicates content items to be transmitted through the network during a predetermined time period).

Second, the cited passages (paragraphs 67 and 83) say nothing of updating the list of content items by adding at least a plurality of content items and removing at least a plurality of content items. At best, the passages talk about receiving and storing fingerprint identifiers (see paragraph 83). These passages say nothing of adding a plurality of content items and removing a plurality of content items. Here, again, the final Office Action overstates the teaching of Schmelzer.

Thus, the final Office Action fails to establish a *prima facie* case of obviousness for claim 36 over Schmelzer and Razdan.

The rejection of claim 36 should be reversed.

Claim 38

Independent claim 38 recites:

38. *A method comprising:*  
*receiving a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself;*  
*adding and deleting entries in a table or data structure according to the list of content items;*  
*receiving a content item, the content item comprising audio or video;*  
*deriving at least one fingerprint from the content item itself;*  
*interrogating the table or data structure with the derived at least one fingerprint to identify the content item;*  
*communicating a signal representing at least the identified content item to a remote device.*

Claim 38 recites receiving a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself; and adding and deleting entries in a table or data structure *according to the list of content items*.

We guess<sup>1</sup> that the final Office Action intended to use Schmelzer's paragraphs 67 and 83 to reject these features of claim 38. See the final Office Action, page 8, lines 1-5.

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<sup>1</sup> Appellants shouldn't have to "guess" how a claim is rejected. The final Office Action rejects 20 claims in a mere 19 lines – less than 1 line per claim. See the final Office Action, page 7, lines 16 – page 8, line 12. Forcing an Applicant to guess as to how a claim is rejected cuts strongly against established case law (e.g., KSR) and the MPEP (e.g., MPEP 706.02(j)). Indeed, the key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reasons why the claimed invention would have been obvious. See KSR and In re Kahn.

But paragraphs 67 and 83 – reproduced above – say nothing of adding or deleting entries *according to a received list of content items*.

The rejection of Claim 36 will be reversed on Appeal.

***Rejections under 35 U.S.C. §112, first paragraph***

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. See, e.g., *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003). An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997).

We respectfully submit that the claims have adequate written description support. Indeed, support for the claims can be found throughout the application including, e.g., page 10, line 1 – page 12, line 7; Fig. 1; and Fig. 2. These sections and figures describe methods and systems for fingerprinting and identifying content through, e.g., database lookup. Surely, based on these specification sections and figures (and their inherent teachings), one of ordinary skill would find that the inventors were in possession of the invention as recited in the pending claims.

Please see the above section “Summary of Claimed Subject Matter” for specific specification support for the claims.

We ask that the formal rejection under §112 be reversed.

**CONCLUSION AND REQUEST FOR REVERSAL**

Appellants respectfully request the Board to reverse the final rejection of the pending claims.

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**CLAIMS APPENDIX**

1 – 29. canceled.

30. (previously presented): A method of monitoring or analyzing a content item which is to be broadcast through a broadcasting network, the content item to be identified by a fingerprint of the content item derived from the content item itself, said method comprising:

maintaining a list of content items, the list comprising a subset of content items designated as active, the list of content items being associated with one or more fingerprints derived from the content items themselves;

deriving at least one fingerprint from a content item monitored or analyzed from the broadcast network; and

interrogating the list of content items with the at least one fingerprint to identify the monitored or analyzed content item.

31 - 35. canceled.

36. (previously presented): A method of monitoring or analyzing a content item which is to be transmitted through a network, the content item to be identified by a fingerprint of the content item derived from the content item itself, said method comprising:

maintaining a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself;

receiving a playlist, the playlist identifying content items to be transmitted through the network during a predetermined time period;

based at least in part on the playlist, updating the list of content items by adding at least a plurality of content items and removing at least a plurality of content items, but not all of the content items, from the list;

deriving at least one fingerprint from a content item monitored or analyzed from the network; and

interrogating the list of content items with at least one derived fingerprint to identify the monitored or analyzed content item.

37. (previously presented): A computer readable medium comprising instructions to perform the method of claim 36.

38. (previously presented): A method comprising:

receiving a list of content items, with each item on the list of content items being associated with one or more fingerprints derived from the respective content item itself;

adding and deleting entries in a table or data structure according to the list of content items;

receiving a content item, the content item comprising audio or video;

deriving at least one fingerprint from the content item itself;

interrogating the table or data structure with the derived at least one fingerprint to identify



the content item;

communicating a signal representing at least the identified content item to a remote device.

39. (previously presented): A computer readable medium comprising instructions to perform the method of claim 38.

40. (previously presented): A method comprising:  
maintaining a list of content items, the list of content items being associated with one or more fingerprints derived from data representing audio or video samples corresponding to the content items;

identifying a subset of the list of content items as active content items, the subset being associated with those content items being subject to updates;

deriving at least one fingerprint from a content item monitored or obtained from a network; and

interrogating the list of content items with the at least one fingerprint to identify the monitored or obtained content item.

41. (previously presented): The method of claim 40 wherein the content items comprise at least audio or video.

42. (previously presented): The method of claim 30 wherein said act of deriving comprises deriving two or more fingerprints of the content item.

43. (previously presented): The method of claim 42 wherein said act of interrogating the list of content items utilizes the two or more fingerprints to identify the monitored or analyzed content item.

44. (previously presented): The method of claim 30 wherein the content item comprises audio or video.

45. (previously presented): The method of claim 30 wherein the subset of content items designated as active are associated with database entries to be updated.

46. (previously presented): The method of claim 36 wherein said act of deriving comprises deriving two or more fingerprints of the content item.

47. (previously presented): The method of claim 46 wherein said act of interrogating utilizes the two or more fingerprints to identify the monitored or analyzed content item.

48. (previously presented): The method of claim 36 wherein the content item comprises audio or video.

49. (previously presented): The method of claim 38 wherein said act of deriving comprises deriving two or more fingerprints of the content item.

50. (previously presented): The method of claim 49 wherein said act of interrogating utilizes the two or more fingerprints to identify the content item.

51. (previously presented): The method of claim 38 wherein the content item comprises audio or video.

52. (previously presented): The method of claim 40 wherein said act of deriving comprises deriving two or more fingerprints of the content item.

53. (previously presented): The method of claim 52 wherein said act of interrogating utilizes the two or more fingerprints.

54. (previously presented): The method of claim 40 wherein each item on the list of content items is associated with one or more fingerprints derived from the respective content item itself.

55. (previously presented): The method of claim 40 further comprising, prior to said act of interrogating, updating the subset.

**EVIDENCE APPENDIX**  
**(No Evidence)**

**RELATED PROCEEDINGS APPENDIX**  
**(No Related Proceedings)**